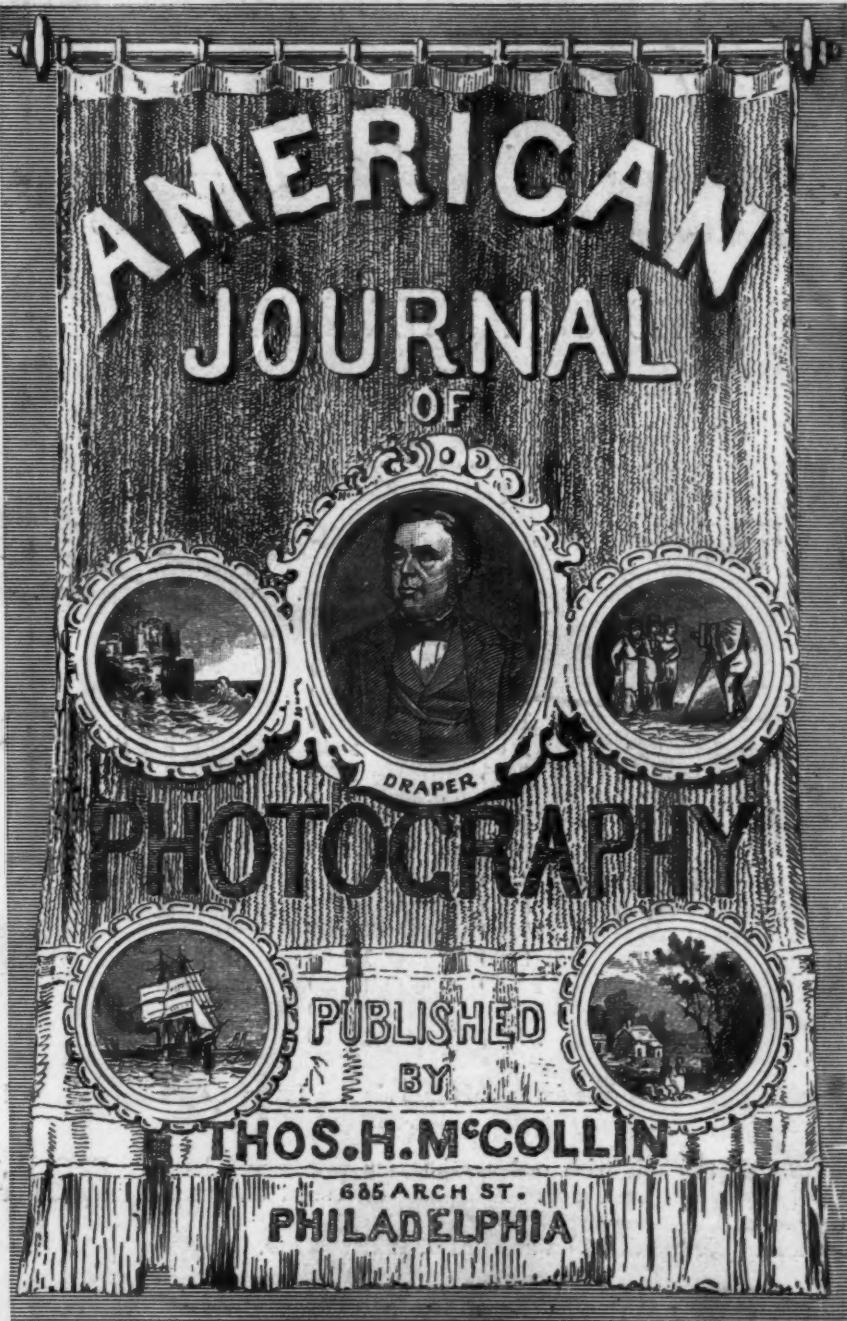



Vol. 7.

SEPTEMBER, 1886.


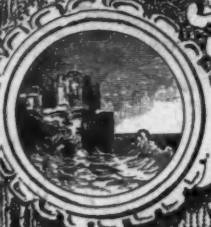
No. 9.




AMERICAN
JOURNAL
OF




DRAPER



PHOTOGRAPHY



PUBLISHED
BY



THOS. H. McCOLLIN
685 ARCH ST.
PHILADELPHIA

Published Monthly at \$1.00 per Year, in Advance. Single Copies, 10 Cts.

Entered at the Post Office at Philadelphia as Second-Class Matter.

PERMANENT

➤ Photographic Enlargements ➤

FOR PHOTOGRAPHERS AND ARTISTS

—BY THE—

Electric Light.

NO DELAY ON ACCOUNT OF WEATHER.

Size.	Unmounted.	Mounted.	On Oiled Canvas, Mtd.
8 x 10*	\$1 00	\$1 25	\$2 20
10 x 12*	1 00	1 25	2 25
11 x 14*	1 25	1 50	2 50
14 x 17*	1 50	2 00	3 00
16 x 20*	1 75	2 25	3 75
18 x 22*	2 00	2 50	4 00
20 x 24	2 25	2 75	4 70
22 x 27	2 50	3 00	5 35
25 x 30	2 75	3 50	6 00
26 x 32	3 00	3 75	7 50
29 x 36	4 00	5 00	8 00
30 x 40	5 50	6 75	8 25
35 x 45	7 00	8 50	
40 x 50	9 00	12 00	
45 x 60	12 00	16 00	
50 x 70	15 00	20 00	
52 x 80	20 00	25 00	

* Negatives, 25 cents extra on these sizes. Intermediate sizes charged as next size larger.

TERMS:—Cash with order, otherwise prints will be sent C. O. D., with return charges added. Estimates furnished on every description of art work.

Remember, no delay on account of dull weather.

THOS. H. McCOLLIN,

635 ARCH STREET.

PHILADELPHIA.



Negative by H. PIETZ, Springfield, Ill.

Printed on Morgan's Albumenized Paper.

AMERICAN JOURNAL OF PHOTOGRAPHY.

Published by THOS. H. McCOLLIN.

VOL. 7.

PHILADELPHIA, SEPTEMBER, 1886.

No. 9

AMERICAN JOURNAL OF PHOTOGRAPHY

—PUBLISHED MONTHLY—

\$1.00 per Annum, in Advance.

LANTERN SLIDES WITH GELATINE PLATES.

There seems to be a general preference for wet collodion slides to those made with gelatine dry plates; the objection to the latter being the want of transparency in the high lights and the consequent flat appearance of the positive when projected upon the screen.

As this falling off in the virtues of gelatine is not confined to the observation of amateurs, but is generally brought against its use by practical slide workers, it might seem to be an ill inherent in gelatine itself and not a fault to be corrected by a change in manipulation.

Another objection, of more weight with the professional than the amateur, is the difficulty of securing uniformity in the tone.

In collodion the same tone may always be had, provided the conditions are the same, but gelatine is accused of wilfully taking on all sorts of unexpected hues.

The great convenience in the use of gelatine plates in printing by contact and by ordinary gas light, induced me to try a modification of the usual plan of working the gelatine plate for lantern positives.

The good results which followed therefrom may be of interest to those who delight in this most beautiful production of photography.

A transparency in the high lights was secured and the shadows were also clear,

yet of sufficient intensity to represent upon the screen a well modulated picture.

The slides may be printed either by contact, or if the negative is not of the regulation slide size, a reducing camera may be used.

The kind of plate used was the slow variety (Carbutt's A), containing a certain percentage of iodide of silver.

Rapid plates gave fair results, but not as brilliant as the slow plates.

The time of exposure, of course, depends upon the quality of the negative and the intensity of the light.

Rather more than full time was always given to the exposure, to avoid harshness and to accommodate the plate to the rather slow process of development to which it is subjected.

The developer is made as follows:

One part of saturated solution of Proto Sulphate of Iron to five parts of a saturated solution of Oxalate of Potassa, made slightly acid by the addition of Citric acid.

Take of this solution of Iron and Oxalate Potassa, 1 part
Water, 8 parts
Bromide of Potassium (10 grs. to oz.)
5-10 drops.

Citric acid, (10 grs. to oz.) . . 5-10 drops

Sugar Solution, (10 grs. to oz.) 4-6 drops

As this developer is rather weak and contains both restrainers and retarders, the necessity of plenty of time in the exposure is evident.

Do not allow the slide to develop to any intensity. Some care will be required here, as the slow variety of plate gains intensity much sooner than the rapid kind. Remove the plate immediately when the detail is up; wash and fix in the usual manner.

The slide, when removed from the hypo,

should be rather thin. It requires intensification.

After thoroughly washing it immerse in a solution of Bi-Chloride of Mercury, (not necessarily saturated) to every 15 ounces of which is added one scruple of strong Hydrochloric Acid.

The plate is allowed to remain in this bath until the image becomes silvery white, it is then washed and placed for five or ten minutes in a solution of Chloride of Ammonium of the strength of 1 part saturated solution of Chloride of Ammonium to 25 parts of water. After well rinsing the plate it is placed in a solution consisting of one drachm of the ordinary Potash accelerator used in Pyro development to 2 ounces of water. Probably the Sulphite of Soda in the accelerator effects the darkening of the slide and might be employed alone advantageously.

The tones produced are soft and pleasing to those who admire warm brown tints. The shadow are rich and clear and the high lights soft yet brilliant.

The results are undoubtedly superior to any I have obtained by any other process. Moreover, the tones are constant and do not change, a tendency which most slides have when intensified with Mercury and Cyanide of Silver.

The plan of making the slide thin and building up by intensifying will be found to give more variety in the half tones than if the plate be allowed to lie in the developer until it gains density.

For the great advantage arising from the clearing action of the Chloride of Ammonium I am indebted to a writer for the *British Journal of Photography*. I had previously used it in the mercurial solution, but the results are better when used separately.

JOHN BARTLETT.

STELLAR PHOTOGRAPHY.

Paper read by William H. Knight before the Cincinnati Society of Natural History, August 3d, 1886.

A striking feature of modern scientific investigation is the inter-dependence of the various branches of science and art upon each other. Every new discovery in science stimulates the development of some

new art, and conversely, the practice of the art opens the way to further and more important discoveries in the realm of science.

The art of photography owes its existence to a knowledge of the laws of light and of chemical action. In turn it has aided the astronomer in accurately mapping the surface of the moon, in tracing the true path of Venus across the sun's disc, and in delineating the fierce solar storms incident to the production of sun spots and protuberances. More recently it has been employed with remarkable success in charting the minute stars of the distant universe.

An instrument has been constructed for this purpose by the brothers Paul and Prosper Henry, of the Observatory of Paris. It is composed of two telescopes in juxtaposition, inclosed in a single metallic tube. One of the telescopes is intended for the eye, and is used as a pointer or finder. The other is achromatized for the chemical rays, and serves the purpose of photography. Through this instrument stars of the fourteenth magnitude exhibit themselves on the photographic film under a diameter of about one ten-thousandth of an inch. They are so exceedingly minute that some of them might be confounded with the imperfections in the sensitized film. To cure this defect three exposures are made, so that three points representing a single star form an equilateral triangle, whose sides are only about one three-thousandths of an inch in length. To the naked eye these three points appear merged into one, but under a strong lens the three exposures become distinct, and it is then easy to distinguish in the negative anything that does not belong to the heavens, and so eliminate it.

By means of this instrument we obtain in three hours an absolutely correct chart of any given field, whereas by the best methods hitherto adopted, it would have required several months to make a similar chart, and one that would only be *approximately* correct at that.

But the chart does not merely localize the positions of the fixed stars. It also traces the slightest movement of planet or comet. An unsuspected asteroid will in

three hours demonstrate its planetary character by showing a line instead of a point, and the moons of far-off Saturn and Uranus will, in a single sitting, exhibit their orbital motions.

The autograph thus furnished by the stars themselves must prove an invaluable aid to future astronomers engaged in solving the problems of double or binary stars, and of parallactic values. The minutest deviation in distance or direction between two companion stars, shown by photographs taken several years apart, will be recorded by a process at once infallible and far less tedious than the old methods, thus greatly extending the range of individual observations, and vastly multiplying the data from which to generalize and deduce well-founded conclusions.

From binary systems we proceed a step further and undertake to penetrate the deep mysteries of star clusters. In doing so we naturally select the most conspicuous group in the heavens, and point our obedient camera to the Pleiades.

During the past winter this telescope of the brothers Henry has been directed to the observation of the Pleiades, with the most magnificent results. Hitherto all the stars in that beautiful cluster, down to the fourteenth magnitude had been laboriously catalogued by M. C. Wolf. His chart embraces 571 stars, contained in a rectangle of $2\frac{1}{4}^{\circ}$ one way by $1\frac{1}{2}^{\circ}$ the other. The number of these stars was more than doubled by the camera, and upward of twelve hundred individuals, including some of the seventeenth magnitude, were imprinted on the photographic chart. Many of these were invisible to the eye. Among them was a nebula of spiral form encircling the fifth magnitude star Maia, of which no visual trace had ever been perceived. This nebula came out with surprising intensity in four different plates, and, therefore, could not be attributed to any accidental imperfection in the sensitized paper. But photographic discovery led the way to visual detection. The largest refracting telescope in the world is the great thirty-inch refractor at the Pulkowa Observatory, at Russia, presided over by the eminent astronomer, Otto Struve. Learning of the

interesting discovery made by the brothers Henry, he directed his gigantic instrument to its investigation and at once confirmed the discovery.

But this nebula surrounding the star Maia is not the only one in the Pleiades. Another one has been occasionally observed and variously described as encompassing the star Merope. It is so exceedingly faint and illusory that it can only be seen in a perfectly clear atmosphere, and no two observers could agree as to its form. Air so translucent as to allow stars of the thirteenth or fourteenth magnitude to shine clearly may still contain mist enough to shroud the Merope nebula, so delicate is its organization. But photography has cleared up the mystery. The camera steps in as arbiter, and determines not only the fact of its existence, which has often been questioned, but accurately sketches the peculiar form—an irregularly striated formation, with a comet-like train of almost evanescent luminosity.

As before remarked, some of the stars clearly imprinted on the Henry chart are of the seventeenth magnitude, and are too small for any telescope hitherto constructed to disclose to the eye, but as Miss A. M. Clerke remarks in *Nature*, "the retentive photographic retina has time on its side." The time thus required for the faint stars implies considerable over-exposure for the bright one. While a first magnitude star requires an exposure of only one five-thousandths of a second, a sixth magnitude, the smallest visible to the naked eye, needs only one five-hundredths of a second; seventh magnitude, one and three-tenths of a second; tenth, twenty seconds; twelfth, two minutes, and sixteenth, one hour and twenty-three minutes. It will thus be seen that a sixteenth magnitude star requires 1,000,000 times longer exposure than one of the first magnitude.

Miss Clerke, above quoted, speculates as follows in regard to the Pleiades: "The stars of the Pleiades are immeasurably far off. None of them has any sensible parallax, and we are thus uninformed as to their intrinsic luster, mutual distance or gravitating mass. It is, however, easy to complete the dimensions of the group

relatively to its remoteness from ourselves. We thus learn that the furthest of the suns congregated in this group, are just seventy-one times as distant from us as from Alcyone, the centre of their own system. Consequently Alcyone blazes upon them with five thousand times the lustre it displays to us, or as a star about eighty-six times the brilliancy of Sirius.

"The glimpse afforded by recent investigations of the structure of the Pleiades group is a very surprising one. We find in it a miniature sidereal system, the richness and variety of which bewilder theoretical conceptions. Nebulæ are discovered in intimate connection with lucid stars, and in suspicious relations to their luminous vicissitudes, while themselves subject to strange alternations of visibility. Stars of all orders are included in one vast assemblage, some doubtless magnificent orbs, of many times the radiance of our sun, others as inferior to them as the moons of Mars to Jupiter.

"The distribution of these bodies appears to be no less varied than their size. Groups are collected within the main group, and systems revolve apart, the subordination of which to the laws of a general federative union leaves their internal liberty of movement unshackled. It is not, indeed, certain that dynamical equilibrium of the whole subsists. Hints of a centrifugal tendency have been caught suggesting that our impulse of operation may at present be the predominating one."

"Thus at last," continues Miss Clerke, "we seem to be on the verge of learning something of the interior mechanism of a star-cluster, the extraordinary difficulty of the problems presented by which has hitherto almost silenced speculation. The facilities for collecting the necessary data offered by the recent enormous improvements in stellar photography will doubtless help to stimulate the inquiry, as well as to assure its conclusions."

THE *British Journal of Photography*, of August 27th, gives an effectual yet simple cure for frilling. It is nothing more than a solution of common salt in water, in which the plate is bathed before fixing.

ABOUT CAMERAS.

One of the most important parts of the outfit of the amateur photographer is his camera. It is extremely desirable that it should be light, compact and so well constructed as to preclude all possibility of leakage of light.

In the smaller sizes the attainment of lightness and compactness is comparatively easy, for when it is desired to take an upright subject the box may be reversed by simply tilting it upon its side, and although when used in this way, the power to swing the back so as to bring the perpendicular lines vertical, is lost, with the majority of makes, this is not a matter of vital importance in ordinary subjects when taken small. But when we come to larger work, namely five by eight inches and above, the defects of tilting perpendiculars become too evident and it is necessary that the back of the camera should swing both in the horizontal and upright position.

It is the ambition of most beginners to work large, at least as large as the five by eight size. A camera of this size becomes too unsteady when tilted on end, and then in taking most subjects so tall it is absolutely necessary that the back should be swung to secure a truthful appearance in the picture. In order to attain this advantage, most view cameras are made with the back equal in height and breadth to the longest way of the plate holder, namely, a five by eight view camera has a back some ten inches square, so that when the holder is placed against it, it does not matter whether it is up and down or across, it has the advantage of the swing to bring it to perpendicular both ways. But this necessarily adds very much to the bulk and somewhat also to the weight. An ingenious plan has been adopted by one of the makers in which there is a swinging bed, and on this bed the frame to receive the holders may be attached in a moment either horizontal or upright, the bellows revolving in the front. This ensures the swing both ways, and an additional advantage with this camera is that as it carries as an upright and the bed folds up against the long way of the back, it consequently has a long

bed and being provided with a proportionately long bellows has a very long draw, which is a great advantage in a camera, not only in landscape work, as it permits the use of a long focus lens, thereby causing less distortion and giving objects a more truthful appearance, but also for taking small objects and for much copying. It is an extremely compact and portable camera, though none of the lightest on account of the amount of metal about it.

In addition to the combined swing and long draw, another important advantage in a camera, is to have either the back or the front, as the case may be, for sometimes the one and sometimes the other is movable, to travel by a ratchet movement on the bed, as this not only ensures a steady movement, but enables the finest adjustment of focus to be got instantly. Where the back of a camera slides out in grooves it seems to be impossible to avoid sticking and jerking, rendering a fine focus difficult of attainment. And sometimes on a journey where one encounters fog and dampness, they become completely stuck fast in their work from their inability to focus their camera.

In regard to the front or the back moving, with the larger sizes it seems rather an advantage that the front, or part carrying the lens should run out, for this permits the placing of the bed plate, by which the camera is secured to the tripod, under the part where the greatest weight comes, namely, the back, for here in addition to the focussing screen, you have when the plate holder is on, the two plates, and as slides often require a good deal of pressure to return them after the exposure of a plate, which is downwards in the case of an upright, the strain is very great; and with those cameras which have the bed plate far forward there is always a swaggy-ness and unsteadiness which is at least uncomfortable to a particular person.

It is a very important consideration for traveling that when the camera is closed it should form not only a compact but a resisting parcel on every side. Some cameras, which have very slight fronts which are well enough for the purpose of holding the lens, are not well suited for long rough

journeying, the front not having sufficient stability to resist violent pressure or knocks.

The Flameng camera is so constructed as to fold up very flat, and is strong, but none of the lightest. Its greatest advantage consists in the extreme ease and rapidity with which the focussing screen may be swung from horizontal to perpendicular, the portion of the back carrying it and the plate holders revolving in a circle. But this make is of a higher price than the class of which I am writing generally.

The large class of cameras which come within the reach of the majority of amateurs are of comparatively low price, and while they are not as complex or as neatly and handsomely finished as high priced cameras, they often have the advantage of being much lighter. Lightness is a consideration of great importance, for although we may be disposed to treat the matter *lightly* in our enthusiasm at setting off on a day's excursion, we will certainly find it a *weighty* one by evening, especially if we have had much walking to do in the hot sun. The weight of the plates is an unvarying certainty and the more cutting down we can do in other directions the better. Provided, however, that we do not go past good material and sufficiently neat construction to ensure success in our work, for it is folly to be spending time and enthusiasm and wasting plates and money in the use of cameras and plate holders that, through ill focussing or more particularly leakage of light, will ruin our best efforts.

That every part should be as rapidly adjusted as possible is of great importance, because often when figures or cattle happen to come well into a view, if we are not able to seize them at once we lose our chance. There is nothing more provoking than to see such helps to the completeness of a picture walking off, while we are fumbling with some ill arranged contrivance, trying in vain to get it in place.

A good strong, firm tripod is an important part of an outfit. It should have a sufficiently large top for the bed of the camera to have a firm bearing upon it, and the screw which secures the camera to the tripod should be large enough in diameter

to ensure thorough strength, as it is often desirable to carry the camera for a considerable time attached to the tripod, either over the shoulder or under one's arm. With a weak, trembly tripod there is not only risk of tremor, but it also often happens that the effort of adjusting the plate holder or withdrawing the slide gives the whole a tilt or twist, compelling one to again refer to the focussing glass to see that their subject has not been thrown out of proper position. The power to shorten or extend the legs of a tripod is invaluable, both on account of being able to choose a high or a low point of sight and to adjust it to uneven ground. Even when working in apartments it is often necessary to be close to the wall, in which case the leg which must be thrown nearly perpendicular, can at the same time be shortened, thus keeping the camera level.

It is of advantage to have a carrying case larger than just sufficient to hold the camera and one plate holder. There should be room for several holders, the focussing cloth and the top of the tripod, and an additional lens. And it often happens that one must set up their camera and get out their traps in wet grass or swampy or muddy ground, and if you have an ample box you do not need to haul everything out of it and pile it on the ground to get at what you require. And in journeying it will be found much easier to get along with simply the tripod and one ample carrying case than to be encumbered with three or four packages. X.

Reminiscences of Travel of an "Old-Time" Amateur.

Continued from August Number.

To the Editor of the American Journal of Photography.

Dear Sir :—I must return to the gay and beautiful city of Paris for a moment, if for nothing else than to speak of its admirable Photographic Society. Their rooms were so arranged that the valuable collection of photographs of all kinds could be well exhibited and kept, without interfering with the regular meetings which at that time were held monthly, the total membership

amounting to 200, of whom only five were professional men. I wish that all of your readers could have seen even the few magnificent samples of work that my limited time allowed me to examine. Remember that this was all Collodion work, and much of it on the old fashioned dry plate to which I have often alluded before. The actuary of the Society was always to be found in the rooms during business hours, and his native courtesy enabled me to see and learn all that my time permitted. I did not leave that gentleman and that room willingly, I assure you. Among the things I saw were originals of Daguerre, curious old apparatus, views from every part of the world, and (to me the finest of all) an immense enlargement of the west door-way of the great Cathedral at Rheims—one of those wonderful pieces of mediæval ornament that our own art alone is capable of grappling with, if any *just* idea is to be pictorially conveyed.

I also had the pleasure of visiting Mr. Davanne, a celebrated French amateur, at his studio. His working outfit was beautiful. I noticed a drying rack for negatives, with the grooves entirely in porcelain. His work-table was set in tiles, so that acids, etc., etc., would have no effect. He sensitized the Collodion plate in a *dish*—not a dipping bath; I bore this in mind, and some time afterwards, when working large plates, I found this method an excellent one. At that time it was in general use throughout the continent.

I also visited the suburb called Asnieres, to see Mr. Rousselon, who there makes the well known "Photo-gravures," sold by Goupil & Co. Every thing in this extensive factory worked perfectly, and I was particularly interested in a double row of fine *rolling-presses*, twelve in number. The workmen and women were all polite and quiet. After I had seen all, I had a pleasant chat with the proprietor, who, of all *conservatives* in photography that I had yet seen, was the greatest.

In sitting for a portrait at Braun's, I noticed that the posers and operators were both skillful and *quick* in their work—no wrenching about of the head and limbs or anything else to make one nervous, but the

exposure was over almost before I knew it. An invitation into the dark room followed; here there was nothing special to observe, except that the water-tap was controlled by the foot—not by the hand. I passed several pleasant days in Caen, (in Normandy) picking up what I could. The lower classes here were also nice people. The only time that I ever had a *chair* offered me to rest on during exposure was in this quaint old place. The streets being very narrow, as in most towns of the kind, I was forced to leave many of the historically valuable subjects unattempted. Even a "Busch's Pantascope" would not have included a wide enough angle. If any of your readers visit this place, let them not fail to go to the little town of Falaise, the birth-place of William the Conqueror. Besides the historic memories naturally arising here, they will find a superb bronze equestrian statue of the hero, and as it stands in a "hemmed in" locality, with other photo-difficulties, it will be a fitting subject for our now improved photography; and should any of your readers secure it, I hope they will send me a print, for a good print, or even model, of the statue was not then to be had (1877) for "love or money."

Another delightful excursion from Caen, is the one to Bayeux, where the well-known Bayeux tapestry can be seen in the museum. After seeing it (just for the sake of being able to say so), I hurried out with the camera and explored the town, securing some "bits," one of which was afterwards chosen by the Photographic Society of Philadelphia for presentation. I have great faith in the enthusiasm of a true amateur for his work—that is, give such a one his choice between "sight-seeing" and the securing of a fine subject with his camera, and I am pretty sure he will take the latter.

There is a most curious place, known as the *Mont-Saint Michel* (Saint Michael's Mount), just off the coast of France, some seventy miles south of the channel islands. If I were asked whether it stood on the dry sand of the beach, or in the ocean itself, I should be puzzled how to answer, for the tide rises there in an abnormal

manner—the only thing like it that I know of being in our own Bay of Fundy and thereabouts. The Mount being far away from shore, it is a great risk for any stranger to venture out to it even when the beach is dry, for many lives have been lost in the quicksands abounding there, as well as in the surf which comes in with fearful suddenness and force, as well as actual depth.

I could write page upon page about this place, but let me become practical at once and mention an *old boot-leg* and some chips of wood that I carefully gathered and laid on the treacherous sand so that it might not give way under the camera and double all the outlines. Pardon me the slang, if I say that "I had been there before." So, then, to cut a long story short, I exposed all the plates I had on this splendid subject, and developed with good results in one of those same Channel Islands; that will remind your older readers of the late Thomas Sutton, who spent much of his time there.

Our route this year (1877) taking us back to London, I found, as before, much to interest me. When I called on Mr. J. Traill Taylor, editor of the *British Journal*, I need hardly say he received me with every courtesy, and, in the course of a merry chat, told me how in the early days of the Daguerreo-type he was out on a picnic with the inevitable camera, and foiled a rival in the graces of a fair lady thus: Knowing well that a reapplication of the iodine vapor would either destroy the latent image or prevent it from forming, he slyly took a pinch of iodine and rubbed the inside of the camera full of it while his rival's back was turned for an instant. The latter then exposed his plate on a group of the ladies, putting on no small "airs" as he worked, and gave, moreover, an exposure that was long even for those days. Poor unsuspecting man! Of course, no image was formed at all, though the door of the holder and the cap of the lens were both removed in the most approved manner. His vexation on developing the first trial was great; on a second attempt with the same subjects (and this time a length of exposure that tired them extremely) the failure was even

worse; and finally after a third attempt the rival gave up in despair.

Mr. Taylor also was the first in whose hands I ever saw the "Changing Box," by G. Hare, whose name is now so well known to American amateurs. I have heard it said that gelatine plates could not be worked in such a box, but when we come to examine into the real reason for such an assertion, we find that it is because many of the commercial gelatine plates are badly and irregularly cut. Now I have always maintained that if plain glass can be cut accurately, so can a coated dry plate, no matter how sensitive. In short, it is merely a mechanical matter, and I dislike to see such a very convenient piece of apparatus dropped out of use because some careless fellow cuts the glass wrongly.

Another of my photographic actions in London was to buy and bring home some lenses for no less a personage than yourself, Mr. Editor. But I shall now bid you farewell, and hope in my next to tell you of my interesting visit to the late W. B. Woodbury, Esq.—a man whose empty place few or none will fill for us.

Very truly yours,

ELLERSLIE WALLACE.

Improvement in Photographic Printing and Enlarging.

Continued from August Number.

Before commencing the operation, I will pass around for your inspection some samples of work by this method. You will observe that they represent two pictures, which we will number 1 and 2, from the same negative. No. 1 being fully timed in the face, but lacking in the drapery; No. 2 fully exposed, with soft detail all over. The first represents the result from that class of negative unaided; the second shows the effect of auxiliary printing, and demonstrates not only what may be accomplished in the way of improving the result from a poor negative, but the possibility of enhancing the valuable qualities of a really good one. I will now throw on the screen, or focussing board of the easel, an image of the negative from which these prints are made, reduced to a convenient

size, and then exemplify both ways of operating.

Having obtained a focus, I cap the lens and open the light-tight box on the upper part of the easel, and, taking hold of the loose end of the sensitive paper contained therein, draw down sufficient to accommodate the dimensions of the pictures desired. Closing the box, and holding in the right hand this piece of straw-board, of sufficient size to completely cover the margins of the picture, admitting the image through an aperture in the centre of suitable form for vignetting purposes, cautiously uncap the lens, gently moving the vignetting board back and forth, to insure softness of blend, we give ten seconds over the whole image. This, we know, is sufficient time for the face and thinner portions of the negative. Now recap the lens, and take another piece of card-board as large as the first, but with an aperture no greater than will admit such portions of the bust and drapery as it is desired to aid by additional printing. Again uncap the lens, using the card-board as in the first case, only being careful to cover up those parts which judgment assures us are already sufficiently timed, and proceed with another exposure of ten seconds. Thus, you see, we secure just twice as much time on the denser parts as on the thinner, with the result that the image will appear like the print No. 2, exhibited; while No. 1 shows what the effect would have been if we had been contented with ten seconds over all. Extra time over the whole image would not answer the same purpose, as then the shadows would be overdone. This local aid may be applied to any class of negative presenting marked contrasts with the most satisfactory results.

Development is accomplished in an exceedingly simple and cleanly manner. The well-known oxalate of iron developer, in a slightly modified form, being found the most suitable for all purposes so far. The formula and directions read as follows:

1—Oxalate of potash 1 pound.
Hot water 3 pints.

Acidify with sulphuric or citric acid. Test with litmus paper.

- 2—Protosulphate of iron 1 pound.
 Hot water 1 quart.
 Sulphuric acid (or citric acid $\frac{1}{4}$ oz) $\frac{1}{2}$ dram
- 3—Bromide potassium 1 ounce.
 Water 1 quart.

These solutions keep separately, but must be mixed only for immediate use.

TO DEVELOP.—Take in a suitable tray: No. 1, 6 ounces; No. 2, 1 ounce; No. 3, $\frac{1}{2}$ dram.

Mix in the order given; use cold. After exposure, soak the paper in water until limp; then immerse in the developer.

The image should appear slowly, and should develop up *strong, clear and brilliant*. When the shadows are sufficiently black, pour off the developer and flood the print with the

CLEARING SOLUTION.

Acetic acid 1 dram.
 Water 1 quart.

Do not wash the print after pouring off the developer and applying the clearing solution.

Use a sufficient quantity to flow over the print, say 2 ounces for an 8 x 10. Allow it to act for one minute, and then pour it off and apply a fresh portion; repeat the operation a third time, then rinse in pure water and immerse for ten minutes in the

FIXING BATH.

Hyposulphite soda 3 ounces.
 Water 1 pint.

After fixing, wash thoroughly two hours and hang up to dry. Use fresh developer for each batch of prints. With a glass bottomed tray, 7 ounces of developer are sufficient for a 25 x 30 print.

Object of Clearing Solution.—The object of the clearing solution is to prevent the precipitation of the iron from the developer in the fibre of the paper. This can only be done by keeping the paper acid while washing out the developer.

Citric Acid may be used instead of acetic in the clearing solution, in which case use $\frac{1}{4}$ ounce to the quart of water. Citric acid is less liable to cause blisters.

Blisters sometimes appear in bromide paper, and may be avoided by using a little common salt in the first washing water after fixing. The hypo must not be stronger than 3 ounces to the pint of water.

No Toning Required.—With Eastman's Permanent Bromide Paper, the final tones are obtained entirely by development, and range

from a soft gray to a rich velvety black, depending somewhat upon the density of the negative and the quality of the light used in printing.

Clean Dishes. Clean Hands.—The faintest trace of hyposulphite of soda or of pyrogallol acid is fatal to good results with bromide paper, and the operator cannot be too careful to avoid any contamination. The tray used for developing with oxalate should never be used for any thing else.

Mention has been made in these directions regarding the use of a dilute solution of acetic acid and water immediately after development, and before washing with water at all. This is a most important point and cannot be too strongly impressed on the mind. A brief hint as to the reason for using the acidulated water is shown in the foregoing directions, but it is so important that it deserves further consideration. Pure whites cannot possibly be *obtained and retained* where this precaution is neglected. As noticed in the directions, it had been proved that thorough removal of oxalate of iron can only be accomplished while the print and water are kept acid. It seems that the degree of acidity needs only to be very slight, as the formula shows. This has been commented on, and several who doubt the efficacy of the homeopathic dose prescribed have increased the proportion, but have not found any additional advantage. While in cold weather a moderate increase of the acid may not have any serious influence, it may in hot weather develop a tendency to blistering and should be avoided.

In any case, it is not so much the amount of acid as the repeated application of the very dilute solution recommended, which will fulfil the demands.

After fixing, another important measure is the use of a first washing water containing common salt, say half a pound to two gallons of water. This will most effectually prevent blistering, unless provoked by some unusually careless manipulation.

DAVID COOPER.

“Things out of hope are compassed oft by venturing.”—*Shakspeare*.

Proceedings of the Seventh Annual Convention of the P. A. of A.

Third Day.

With the intention of starting the discussion for the day, which was upon Dry Plates, and the Causes of Failure, Dr. Nichol remarked that one of the most frequent causes of failure could be traced to imperfect fixing. The plate is removed from the bath too soon. When the gelatine film is immersed in the solution of hyposulphite of soda there is formed a double salt of hyposulphite of soda and silver, which is insoluble in water, but redissolves in the uncombined hyposulphite of soda.

If, therefore, the plate be removed immediately after the white bromide disappears, as is too often recommended in instruction books, there still remains in the gelatine film this double salt of hyposulphite of soda and silver, which has not had time to dissolve in the free hypo solution. Now, if a minute or two of grace be not allowed the plate to work out its own salvation by the removal of this double salt, no subsequent washing will effect its redemption, and when it is brought into the light either the whole or a portion of it will turn yellow. Dr. Nichol's advice, therefore, is to let the plate lie in the hypo at least two minutes after the creamy bromide disappears.

A few unimportant remarks followed on stained negatives, of no practical value, excepting the plan employed by Mr. Beckwith, of Cleveland, in dealing with a large and valuable negative, which had turned yellow.

By placing a sheet of yellow gelatine in front of the stained negative and making a positive, he obtained an image perfectly free from stain and of an even color. From this a negative was reproduced of excellent quality.

The paper, by Mr. Fred H. Wilson, "Is Photography Art?" was read by the Secretary.

A vote of thanks was tendered Mr. Wilson for his paper. Then followed the Progress of Photography in Germany and Austria, by Dr. Eder, and the essay by Mrs. Lockwood, entitled "Yesterday and To-day, or Justice to All."

A vote of thanks was given for these papers.

After some introductory remarks by the President, the reading of Mr. David Cooper's paper was announced, which was entitled "Improvements in Photographic Printing and Enlarging."

A "Tribute to Photography" was next read by Mr. Stuart.

Both these papers were listened to with much interest.

The Secretary then read the Report of the Committee on Awards.

After a careful consideration of the entire exhibit, they award the six gold medals to the following parties as the best:

PORTRAIT WORK.

Decker & Wilbur Cleveland, O.
B. J. Falk New York City.
J. W. Gehrig Chicago, Ill.
J. Landy Cincinnati, O.
J. A. H. Parsons Wheeling, W. Va.
J. F. Ryder Cleveland, O.

SILVER MEDALS.

B. L. H. Dabbs Pittsburgh, Pa.
S. J. Dixon Toronto, Canada.
G. W. Elton Palmyra.
Gilbert & Bacon Philadelphia, Pa.
H. McMichael Buffalo, N. Y.
C. W. Motes Atlanta, Ga.

PHOTOGRAPHIC PRODUCTIONS OTHER THAN PORTRAITS.

GOLD MEDALS.

George Barker Niagara Falls, N. Y.
W. H. Jackson & Co Denver, Col.

One of the silver medals of merit was voted by the Executive Committee to Mr. Burnham, of Boston, for large picture, 30x60, of a lady.

The other to the Eastman Co. for bromide enlargements.

The medals all having been disposed of, the Executive Committee desire to tender Gilling, of Detroit, Mich., honorable mention for the excellence of his enamelled photographs.

SILVER MEDALS.

E. H. Lincoln Dorchester, Mass.
George B. Wood Philadelphia, Pa.

FOREIGN PORTRAIT EXHIBITS.

GOLD MEDAL

F. Muller Munich, Germany.

SILVER MEDAL.

Schutz & Suck Germany.

FOREIGN EXHIBITS OTHER THAN PORTRAITS.

GOLD MEDAL.

George West & Sons . . . England.

SILVER MEDAL.

R. Hamsa Germany.

F. W. GUERIN,
JAS. MULLEN,
J. D. CADWALLADER.

The grand exhibit by the leading St. Louis photographers is as conspicuous for merit as ever, and outside photographers cannot appreciate too highly the magnanimity extended by them in their withdrawal from competing for prizes.

The undersigned, members of this committee, regret it is not in their power to select from their exhibit, among which are to be found displays second to none.

JAS. MULLEN,
J. D. CADWALLADER,
Of Committee on Awards.

The next business in order was the nomination of officers for next year. Mr. Joshua Smith nominated Mr. Cramer, of St. Louis, for President.

The nomination was seconded by several members.

Mr. Clarke, of St. Louis, objected, thinking that the appointment would be an injustice to the nominee, and that the feeling of the fraternity is that the officers should be selected from working photographers, not manufacturers, dealers or journalists.

The nominating committee reported the following :

H. M. Michael, President.

F. W. Guerin, Secretary.

G. M. Carlisle, Treasurer.

James Landy and W. H. Potter, Executive Committee.

Location for the coming Convention—Chicago.

The nominations were closed, and after collecting the vote it was found that Mr. G. Cramer had received a majority, and accordingly was declared President.

On motion of Mr. Clarke, the election was made unanimous.

Mr. Bellsmith was also elected unanimously to the office of Secretary, and Mr. Carlisle as Treasurer.

James Landy and W. V. Granger were chosen members of the Executive Committee.

After a pleasant speech by Mr. Cramer, the proceedings for the day closed.

Fourth Day.

The fourth day was opened by the President reading a poem by Mary Nolan, a tribute of respect to the memory of John A. Scholten.

A vote of thanks was tendered to the lady for this tribute.

The following papers were then read by title : by C. F. Moelck, subject, "Brains and Judgment Most Needed in Photography ;" by Millard P. Brown, subject, "The Successful Photographer ;" by A. St. Clair, subject, "The Decline of Prices and the Remedy ;" by L. A. Sherman, Beloit, Rock county, Wis., subject, "Art Censorship ;" by W. Guild, Rollam, Mo., subject, "Money Making."

An essay on the "Business Management of a Photographic Establishment," by Mr. Carlisle, was well read by Mr. Gentile.

Several attempts were made to start a discussion on practical manipulation under the sky-light, but the members drifted off into other matters relating to business, and some time elapsed before the President started the question.

Mr. Ryder spoke of the advantage in the application of rapid plates in allowing the use of a less intense light than was formerly employed in studio work, and the consequent softness in the modeling attainable. He also spoke favorably of the action of the hand screen interposed between the strongest light and the sitter, in giving more plastic effects, softer shadows and greater variety of half tones.

Mr. Cooper also expressed his favor for the hand screen, by which a skillful operator is able, with almost the ability of a painter, to model the head.

He regretted that it was so little employed by the profession. The great difficulty, he said, was to convince photographers that some care is needed to be taken

in the production of good work. The great aim of many being to find out the easiest way of doing a thing, and not to discover the best way.

Mr. Poole, of Canada, criticised the various methods used by operators to elicit a smile from the sitter, and expressed his abomination of the sickly, sentimental smile usually put on.

Mr. Cooper and Mr. Rollins also gave their experience in evolving a smile.

Mr. Clifford, of Vermont, made some excellent remarks. He said: "This subject has been one of great thought on my part, and I will tell you my method of getting an expression. You tell the person to smile, and it is a mechanical smile; it is not a smile of feeling. I never do that; not even to a child. I study the child's nature, and what interests the child and what pleases the child. When I get the expression I make the exposure. No sitter ever knows when my exposure is made, consequently I do not miss a good result once in five times. A grown person has to be treated differently. We have to have some intelligence in ourselves, and some feeling in ourselves, in order to draw it out in others. That is the hardest study in the whole business. I carry on a conversation with my sitter, if they are intelligent. By that means I am able to get the expression which I desire, and make the exposure when they do not know. That is my way of doing it, and it is the best way, although the hardest to arrive at."

Our pictures for this month are from the studio of Mr. H. Pietz, of Springfield, Ill., who in response to our request kindly sent us a number of specimens of his every-day work.

Mr. Pietz shows much taste in the management of the lights and shades, and in the grouping of the figures.

He produces a good effect without having recourse to singularity of posing and lighting, simply by rendering the subject as it is in nature, with a proper consideration of the modeling effect secured by a judicious use of the top and side lights.

How much more to be preferred is a

skillful management in the illumination of the subject by which a softness in the gradation of light and shadow is secured to all the bizarre effects obtained by studio tricks.

How often are we told "the camera cannot lie," yet every photographer well knows that its claim for probity cannot be admitted unqualified. Like Macbeth's witches, it is the more deceptive, because when it lies it lies like truth; but we do think that many a false accusation is brought against photography to satisfy a craving for the marvellous by those who force it to bear witness to phenomena, which even its tender susceptibility had not given the faintest response.

Not very long ago, the caving in of a mine in a French town entombed a number of unfortunate persons. Noises were heard for days after the lamentable catastrophe, proving that the buried victims were still alive, but no efforts were made for their rescue, because the practical engineers deemed it an impossibility. This was bad enough for the friends and relatives, but one can only faintly imagine the harrowing of their souls by the revelation which a photographer, M. Langlois, made.

A camera, provided with sensitive plates and supplied with a series of electric lamps, was let down one of the narrow openings in the shaft, and by its aid a number of views of the break-in was secured. Among other objects was shown the head of a corpse of a poor young miner, whose face, we are told, showed in relief against the deep gloom of the gallery. But there is a sequel to this ghastly tale. Several brave fellows resolved at last to venture down, and upon entering the chamber of horrors, saw among the wreckage objects such as the sensitive plate had faithfully depicted, but no corpse.

An explanation is demanded. The photographer protests he had not intended any deception, and calls trustworthy witnesses to prove that his negatives have not been touched by anything but the pencil of light. Still the apparition of the head

must be accounted for. M. Langlois confesses that it must be an accidental appearance, imagination building up a harrowing reality from the faint markings of some object upon the negative.

The editor of "La Nature" who regaled his readers with pictures of the ghastly revelation of photography, admits his error in not making a critical examination of the view before publication.

Now, the story, illustrated with cuts, is going its first annual circuit amongst the newspapers, that an enterprising photographer has succeeded in capturing upon the delicate film the impression of the mass of compacted air which precedes the swiftly moving projectile. It was recorded at once as a marvel, no one stopping to question whether air under pressure is any more visible than unrestrained air.

It is granted that an increased density of the atmosphere would increase its refractive index, but then we would only be aware of this by the very slight distortion of objects seen through its mass; but in the photograph of the compressed volume there is a definite form depicted of the mass of air itself seen against empty space, or rather space filled with the ordinary invisible atmosphere.

In a recent visit to Mr. Muybridge, amongst a number of other curious pictures we were shown one of a moving base ball. Strange to say, here was, indeed, the volume of compressed air, represented by a faint elongated shadow, to delight the searcher after the *recondite*, but unfortunately the compression followed as well as preceded the ball. Of course, the former is the photograph of the temporary vacuum created by the displacing volume of the ball.

Prof. Muybridge, who has more of the scientific than the marvelous in his constitution, correctly attributes the phenomenon to the registration of the motion of the ball, whose velocity the shutter was not equal to. He showed us compressed air also in the flight of pigeons.

But the marvels are not done yet. We

are told of an incident which shows the remarkable sensitiveness of lacquer to electricity.

On the evening of the 18th of July, Miss — —, of Plainfield, N. J., whilst a terrible thunder storm was raging, was anxious to protect from the lightning a lacquered tray, which stood opposite a window. In the act of doing so the young lady was startled by a vivid flash, but soon recovering, returned and placed a protecting cloth over the waiter.

The next morning, upon removing the cover, there was seen the "pretty profile" of the young lady upon the lacquered surface of the tray.

We are informed that numerous experiments have been made by experts to produce similar effects, but without success.

We have not seen either the tray or the photographs therefrom, which we are told are on exhibition for the skeptical, but we venture to say they are "of imagination all compact."

It is plainly stated that the tray stood opposite a window, and unless it was placed there at night only, it must have received, day after day, the full benefit of the sunlight, direct or indirect, so that when the flash of lightning came, it was pretty much in the condition of a very badly light-struck plate; in other words, considerably fogged. Now, how could it register an impression when the sensitive surface had responded all over to the action of the actinic force.

We do not wonder at newspapers eagerly seizing such morsels for the marvellous, but surely photographic journals should show a little more scientific scepticism in accepting such tales of the wonderful.

One more and we are done. The origin of the destructive forest fires has been explained by "*a new and plausible theory.*" The pine resin exuding from the trees is said to be lens shape, and before it thoroughly hardens is of a crystal-like clearness. Each of the pelucid drops focusses the sun's rays to a burning point and sets afire some light material, and the forest is quickly devoured.

This last is quite new and is just beginning its paragraphical revolution, but its course is nearly circular and we shall probably meet with it again on its return trip.

In looking at some large photographs of scenery, by a professional, possessed of much artistic taste, we expressed our pleasure at the happy choice of the point of view, and the beauty of the landscape, but regreted the entire absence of figures which we thought would heighten the fine effect.

Not a word spoke the professional in extenuation or defense, but simply laid before us a number of photographs, the work of amateurs, the printing of which had been intrusted to his care, wherein the votaries of the picturesque had sought to show their exquisite taste by the introduction of figures in such ridiculous attitudes, and occupied with such incongruous employment, that we were compelled to admit that the advice to introduce figures in landscapes would generally be more honored in the breach than in the observance.

As far as we know but one gentleman connected with the P. A. of A. has expressed his views upon the propriety of holding our conventions at greater intervals than one year. We do not entirely agree with him in his ideas, as they are not sufficiently general to be of advantage to the whole fraternity. Still we are glad that he so freely expresses his opinion, and sincerely wish others would be as outspoken in their sentiments. We believe the general feeling would be in favor of greater intervals of time, not merely from pecuniary interests, but from the belief in the great improvement in the character of the convention which would undoubtedly follow therefrom.

Let us have the thoughts of many on this important subject.

The convention of English photographers, which met in Derby on August 12, 13, 14,

proved to be, as was expected, a complete success. The energy and zeal of its inaugurators, Mr. J. Traill Taylor, Mr. Pringle, and Mr. J. J. Briginshaw, could hardly result in anything else but success.

There was a coming together of a goodly number of representatives of the art from all parts of the kingdom; both professional and amateurs.

The days were spent in social intercourse, and in photographing the beautiful scenery, for which the surrounding country is so celebrated, the evenings in listening to papers, and in transacting the necessary business.

We are older, *conventionally* speaking, but may learn from this the first general assembly of English photographers.

Mr. Andrew Pringle in his address remarked that the success of the convention depended upon four things. (1) The avoidance of all personalities. (2) The entire absence of jealousy of one another. (3) Adherence to practical work instead of building upon theory. (4) The keeping strictly to the point in any discussion which might take place.

THE September number of the Century Magazine contains two papers of more than ordinary value to the photographer. One on Ametuer Ballooning and another on the Balloon Experience of a Timid Photographer.

One hardly knows whether to be more delighted with the graphic style of the narrators, the intense personal experience and the touches of genuine humor, or with the most interesting, novel, and curious views of the earth and sky, secured at high altitudes.

Not only the multitude which revels in the marvelous will read with keen pleasure these highly descriptive papers, but every one who delights in the analysis of the feelings and states of the mind when subject to new and untired experience.

WE have received No. 20 of Scovill's Series, entitled, "Dry Plate Making for Amateurs," by Dr. George L. St. Clair—a series of practical lessons in the delight-

ful operation of making emulsions for personal use.

The treatise is not scientific, and will therefore probably be more acceptable to the amateur, who is only desirous of practically understanding the various steps needful to secure a good plate.

The text is clear and the directions easily followed, bearing evidence to the writer's thorough familiarity with the subject.

No. 8, Vol. III, of the "Microscopic Bulletin and Science News," edited by Edward Pennock, contains much valuable reading for the microscopist.

The papers from foreign journals are well selected and interesting, and the editorial management of the "Bulletin" well conducted.

"LEISURE MOMENTS" is the title of an amateur magazine, published monthly, at Tioga, Philadelphia.

The ability shown in the editorial work betokens much literary cultivation in the editors. The language used is excellent English, and the style clear and concise. The contributions are not only interesting, but show considerable originality. Altogether the publication is a most excellent one, and demands a hearty support.

The editors are S. S. Stinson and H. D. Hughes, 2103 Venango Street.

We have seen a novel and really beautiful style of window transparency made upon the Eastman Bromide paper.

The smooth variety is selected, an impression made upon it by contact printing with a negative, and the development effected with oxalate of potassa and iron in the usual manner. After fixing, washing, and drying, the print is made transparent by soaking it in a mixture of turpentine, castor oil, and damar varnish until the picture appears on the back, the excess of oil is carefully wiped off, and the paper is ready for coloring; the ordinary transparent oil colors are used; of course, the exercise requires some skill and taste in harmonizing the colors, but there is no need of shading as the shadow

is made by the photograph itself. The color should be put on uniformly and smoothly.

Very pretty effects may be produced by painting on both sides of the picture; the clouds, for instance, look much softer by being put in on the reversed side. The background, too, looks much better when not painted on the same side as the figures, and many other effects may be secured.

When the painting is finished it is laid upon a sheet of clear thin plate glass, and flowed over with a little pool of warm Canada balsam, another piece of plate glass is laid on top, and the two held firmly together over a spirit lamp, until the balsam flows completely and evenly over the surface, the excess is allowed to ooze out between the plates. Clips are used to hold the plates together until the balsam hardens.

Alcohol will dissolve any of the balsam which may have gotten upon the outer surface of the glass. The plate is next mounted in a suitable frame, and backed with ground glass.

"THERE is nothing new under the sun" seems to include even the work of the sun itself. Orthochromatic photography is only a few years old, but at a recent meeting of the Photographic Society of Great Britain. Mr. J. Traill Taylor referred to the method of sensitizing Daguerreotype plates, wherein it was the custom to form first a blue film of silver iodide, and upon this bromide; then further action of iodine yielded a purplish blue surface; and by suitable modifications of this plan of action it was found possible to render color more in accordance with its original value, as instanced in photographing swarthy and blond complexions. Later on, in '66, curcuma was advocated in America; it was published in the journals of that time, and afterwards in this country. An alcoholic solution of curcuma (turmeric) was used, and he could not remember who suggested it, but it was well to know what had been done in the early history of the art. Daguerreotype plates were certainly made more sensitive when heavily bromized.

Sept. Bargain List.

Accessories:

- 1—Papier Mache, Fire Place and Cabinet combined, fair condition, . . . 8 00
- 1—Papier Mache Pedestals and Bases, good order, each . . . 3 50
- 1—Papier Mache Wainscoting, fair order, . . . 3 50
- 1—Universal Position Chair, Crimson Terry; all Attachments except Baby Chair; good as new . . . 30 00
- Spencer Head-rest . . . 11 00
- 1—Floor Rug, 8x8 feet . . . 10 00
- 1—Drapery . . . 4 00
- 1—Drapery . . . 6 00
- 1—Stone Wall . . . 2 50
- 1—Rustic Stile in good condition. Price, new, \$8.00, will sell for . . . 4 00
- 1—Centennial Camera Stand, in good condition . . . 11 00
- 2—Tall Head Rests, price each . . . 2 00
- 1—Papier Mache Log, 2 feet long . . . 2 00
- 1—Papier Mache Rock, 45 in. high . . . 7 00
- 1—Papier Mache Balustrade . . . 7 00
- 1—8x10 Osborne Interior, "new," light left of subject . . . \$17.00

Camera Boxes.

- 1—5x8 Tourist Outfit, including 5x8 Tourist Camera Box, 2 Daisy Plate Holders, 1 Extension Tripod, and 1 Canvas Carrying Case, very little used. Price, new, \$40.50, will sell for . . . 30 00
- 1—4x7½ Stereo Box (wet plate) and Plate Holder, fitted with a matched pair Zantmeyer Lenses . . . 30 00
- 1—6½x8½ Portrait Box and Plate Holder, fair condition . . . 6 00
- 1—8x10 American Optical Co.'s Camera Box and Plate Holder, in good condition . . . 12 00
- 1—5x8 A O Co. first quality box, 4 double holders, carrying case tripod, 1 5x6 Dallmeyer R R Lense, used very little, good as new . . . 68 00

Lenses.

- 1—4x4 Darlot Portrait Lens, with Rack and Pinion Movement and Central Stops. Very little used. . . 25 00
- 1—4x4 C. C. Harrison Portrait Lens, with Rack and Pinion Movement. No Central Stops. . . 25 00
- 1—5x8 Waterbury Lens . . . 2 50
- 1—13x16 Harrison Globe Lens W. . . 20 00
- 1—1-4 Size Darlot Gem Lens . . . 3 00
- 1—11x14 C. C. Harrison, Central Stops. . . 35 00
- 1—Matched Pair Ross Symmetrical Stereo Lens, 4½ in. focus. By using back combination only will cover 5x8 plate full; will be sold singly or in pair. Price each, \$25, per pair . . . 45 00
- 1—8x10 Ross Rapid Symmetrical . . . 55 00
- 1—Finder . . . 2 25
- 1—6½x8½ Walmsley Lense . . . 36 00
- 1—Prohs Shutter No. 2, Pneumatic release . . . 10 00

- 1—Matched pair German Stereoscopic Lenses, in good order. . . 15 00
- 1—Matched Pair imitation Dallmeyer Lenses, per pair . . . 12 00

FOR SALE.

A Handsomely Fitted Photo. Gallery, in a leading inland town of Pennsylvania. For particulars, address F, care

Thos. H. McCollin,
635 Arch St., Phila.

FOR SALE.

Portable House, 10x20, in good order.

Address W,
Care of Thos. H. McCollin,
635 Arch St., Phila.

FOR SALE.

Large Portable House, fitted complete, with privilege of location in West Park.

Apply, THOS. H. MCCOLLIN,
635 Arch St., Philadelphia.

Photographer wants steady position for 1st of October or later. Is first class No. 1 retoucher. Good printer. Good operator. Samples and first class New York references. City or country. Address

GEO. BASSMAN,
23 Second Ave., New York City.

COMPANION FOR THE FIELD AND OPERATING ROOM.

AMATEUR PHOTOGRAPHER

NEW EDITION.

With Two New Chapters, on Paper Negatives and Microscopic Photography.

Being a Handbook for all Lovers of that Delightful Amusement.

By ELLERSLIE WALLACE, JR.

12mo, morocco flexible, sprinkled edges,
—\$1.00—

- Chapter I. Introduction.
" II. Photographic Apparatus.
" III. Emulsions.
" IV. Developers.
" V. Wet Collodion.
" VI. Bath Dry Plates.
" VII. Washed Collodion Emulsion.
" VIII. Gelatina Bromide.
" IX. Printing. [rangement.
" X. General Considerations—Posing and Ar-
" XI. Paper Negatives.
" XII. Microscopic Photography.

Also, an Appendix, containing Tables, useful Receipts, Hints to photographers, covering almost every topic pertaining to the art, and a complete Index.

The directions are sufficiently practical and complete to enable anyone to learn the photographer's art. It is of convenient size. It contains much that cannot be found in any other work published.

For sale by all booksellers, or sent by mail, post-paid, on receipt of the price.

PORTER & COATES, Publishers,
PHILADELPHIA.

Eastman's Special Dry Plates.

ALWAYS RELIABLE!

Eastman's Negative Paper & Roll Holders

Which can be Fitted to any Camera, and all Requisites
for Film Photography.

Eastman's Permanent Bromide Paper,

For Contact Printing and Enlarging.

EASTMAN DRY PLATE AND FILM CO.,
Rochester, N. Y.

St. Louis, Mo., April 16, 1886.

Gentlemen :—The Bromide Paper "C" which you have sent me gives vigorous and clear prints, and my artist finds it to have an excellent surface for crayon and pastel work, so that I believe it to be well adapted for the purpose intended.

Yours truly,

G. CRAMER.

SEND FOR CIRCULARS

Eastman Dry Plate and Film Co.,

Branch Office, 13 Soho Square, London W, England.

ROCHESTER, N. Y

Photographic Stock Dealers

Would do well to write to the

RUSSELL MANUFACTURING COMPANY,
McKeesport, Pa.

FOR PRICE LIST OF

Black & Tinted Ferrotypes Plates

OF THE BEST QUALITY.

These are the STANDARD GOODS.

Send a Trial Order and be Convinced.

NEW BOOK ON Solar Crayon Portraits, —ILLUSTRATED—

Crayon
Portraits.



Theory of
Coloring

For amateurs and photographers, entitled a complete treatise on Solar Crayon Portraits, and the use of transparent liquid water colors, and the theory of coloring photographs, containing 50 pages of practical instructions.

The only Book Published on Solar Crayons

Written by an artist, Professor Barhydt, having devoted twenty years making Crayon Portraits and teaching Crayon Portraiture, has been able from his experience as artist and teacher, to point out those defects that beginners are liable to make. So that amateurs will find this book practical and professionals will gain many ideas from it that will be of value to them.

Price, - - - 50 cts.

May be obtained from all dealers or will be sent post-paid on receipt of price by the publisher,

J. A. BARHYDT, Kingston, New York.

EAGLE STOCK HOUSE.

ESTABLISHED 1878.

AGENT FOR

Seed Dry Plates, Van Sickle Shutters,
Moreno's Developer, Eagle Lanters,
Headquarters for Accessories.

Bargain Lists, List of Specialties and
Price Lists on application.

PROMPT SHIPMENTS.

GEORGE MURPHY.

250 Mercer St., New York

MINOTT M. GOVAN,

Formerly with L. W. Seavey,

Importer of

Choice Photographic Draperies,

Sole Agent for Bird's Patent Vignetter, . \$2.50

Agent for Packard's Pneumatic Shutter . . 4.00

Photographic Backgrounds from 15c to 35c per square foot.

Papier Mache Accessories at reduced prices.

Grass Mats, Ivy, Flowers, etc.

For Price List address

MINOTT M. GOVAN,

28 W. 14th St., New York.



Stamp Photos, Patented December 29, 1885.

Patent Stamp Photos.

Gummed, Perforated and Burnished.

To Licensees, 50 cents per 100 or \$3.50 per \$1000; Minette size, 50 cents for two dozen, or \$1.50 per 100.

Send for circular of special offer for exclusive city rights.

HULBERT BROS., Proprietors, (Genelli), 923 Olive St., St. Louis, Mo.

THE PHOTOGRAPHIC TIMES

And American Photographer.

Issued Every Friday.

MONTHLY EDITION ISSUED THE LAST FRIDAY IN THE MONTH.

Subscriptions.

One copy Weekly issue, postage included, to all points in U. S.	
or Canada,	\$3.00
One copy Monthly issue, postage included, to all points in U. S.	
or Canada,	2.00
Weekly issue to foreign addresses, postage included	4.00
Monthly issue to foreign addresses, postage included	3.00
Single copy, Weekly, 10 cents. Single copy, Monthly, 25 cents.	
A Specimen Number Free.	

Club Rates.

Philadelphia Photographer and Weekly issue of Photographic Times and American Photographer, to one address, for \$6.50.
Subscription price in advance.

Advertising Rates.

Size of advertising pages, $6\frac{1}{2} \times 9\frac{1}{4}$ inches; outside size, $8\frac{1}{2} \times 11\frac{1}{4}$ inches.

Cards, $2\frac{1}{4} \times 3$ inches, per insertion, \$2.50.

One page, each insertion, in either Weekly or Monthly edition, \$20.

Parts of page in proportion.

Business Notices, not displayed, per line, 15 cents.

Special Terms on yearly contracts. Write to publishers. Copy for advertisements must be received at office on or before Monday, five days in advance, of the day of publication. Advertisers receive a copy of the journal free, to certify the correctness of the insertion.

188

SCOVILL MFG. CO., 423 Broome Street, N. Y.

Publishers of

The Photographic Times and American Photographer,

Please send copies of the issue
commencing with 188 for to my address:

Name

P. O.

County

State

Note.—Please specify whether Weekly or Monthly edition is desired.

THE ST. LOUIS DRY PLATE CO.

827 CHOUTEAU AVENUE,

ST. LOUIS, MO.

Have recently Enlarged their Factory, so that they are now able to fill all orders promptly. And under their new management have improved the quality of their Plates, so that they are now more Uniform and Reliable than heretofore, and are pronounced by those who have used them to be equal to the Best in the market.

ST. LOUIS DRY PLATE CO.,

827 Chouteau Ave., St. Louis, Mo

el VIEW CAMERAS *de*

FOR PROFESSIONALS AND AMATEURS.

Ideal.

New Model.

New Model Improved.

Commodore.

Challenge.

For Sale by all Stock Dealers.

Send for our New Illustrated Catalogue.

ROCHESTER OPTICAL CO.,

11 and 13 Aqueduct St.

3d mo-85

ROCHESTER, N.Y.

CARBUTT'S KEYSTONE DRY PLATES

And Photographic Specialties.



Specials for Portraiture.

A. for Transparencies.

B. for Landscapes and General Photography.

OPAL PLATES, Gelatino-Albumen or Gelatino Chloride for Positives and Transparencies.

Multum In Parvo Dry Plate Lantern.

Carbutt's Pyro and Potash Developer Concentrated.

Ruby Paper and Negative Varnish.

For Sale by all Dealers.

**J. Carbutt Keystone Dry Plate Works,
Wayne Junction, Philadelphia, Pa.**

USE

Cramer's Plates.

THE "STAND BY'S."

UNIFORM & RELIABLE.

For Sale by all Dealers.

USE THE STANLEY DRY PLATES FOR QUICK WORK.

BUY THE BEST.

NO OTHER WILL GIVE YOU HALF SO MUCH SATISFACTION.

Send for our

CATALOGUE—

AND GET

The Best of Everything

FOR DRY PLATES

ANTHONY'S Patent Perfect PLATE HOLDERS

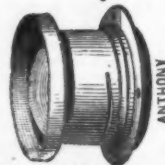
ARE SUPERIOR TO ALL.

APPARATUS OF ALL KINDS.

Dallmeyer Lenses, Success Cameras, The Fairy Cameras, The Novel Cameras, Schmid's Detective Camera.

Chairs, Neg. Boxes, Camera Stands, Printing Frames, etc., etc.

DALLMEYER



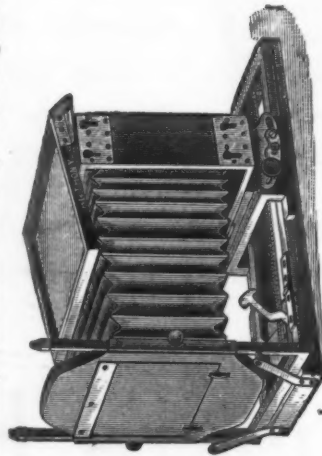
For Wet

or Dry

Wide-Angle Rectilinear

E. A.

SINGLE COMBINATION, RAPID,
WIDE ANGLE, PLATYSCOPE,
PORTRAIT AND VIEW LENSES.



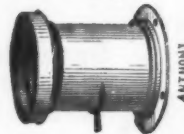
THE FAIRY CAMERA.

The Lightest and Best for Out-door Work.

FOR EITHER DRY or WET PLATES
NOTHING EQUALS

THE BENSTER PLATE HOLDER.

DALLMEYER



Nothing

Compares

Rapid Rectilinear.

O. I. C.

PORTRAIT, COPYING, CLIMAX
PORTRAIT, GEM, AND
COMPACT VIEW CAMERAS.

E. & H. T. ANTHONY & CO., 591 Broadway, NEW YORK.

The attention of Photographers is called to the large and very complete facilities which

PHILLIPS & JACOBS

—NOW HAVE FOR—

Refining all kinds of
Photographic Wastes,

—AT THEIR—

NEW LABORATORY,
No. 622 RACE STREET,
PHILADELPHIA

N. B.—A pamphlet containing directions about saving waste will be mailed free to any Photographer applying for one. 2—84

JAMES F. MAGEE & CO.,

Philadelphia,

Manufacturers of

Fine Photographic Chemicals.

We would call the attention of Photographers to the strict purity and superior excellence of our Nitrate of Silver. We devote special personal attention to its manufacture. And its increasing sale for the past 25 years is the best proof of its popularity.

To those who have not used it—GIVE IT A TRIAL.

For Sale by all

Stock Dealers throughout the Country.

Lantern Slides.

WILLIAM H. RAU & CO.,

1206 CHESTNUT ST., PHILADELPHIA.

A large and unequalled collection of Magic Lantern Slides, representative of the different Countries of the World. Many unique subjects not to be found in any other collection.

As only the most skilled labor is employed, and the work personally superintended, the results are superior to any other house in the country.

We have every facility for making special work, and would call the attention of lecturers and others, who are interested in the subject, to our method of copying from engravings, plans, maps, and objects, which is such that the result produced can scarcely be told from production from the originals.

Special care taken with the making of Slides from Negatives by Amateurs.

Slides Made for the Trade.

SEND FOR CATALOGUE—Free

Having prepared a special department in our establishment for making

Permanent Bromide Enlargements,

we are ready to make enlargements of any regular size from PROFESSIONAL or AMETUER Negatives promptly, and of the best quality.

When good original negatives are furnished, these enlargements require little or no finish, and are far superior to those made by any other process.

Permanent Bromide Enlargements can be artistically finished in india ink, crayon, pastel, water colors, or oil with facility.

Enlargements can be furnished within 48 hours after receipt of negative.

When sending Negatives for Enlargement please specify—1st. Size of Print. 2d. Vignetted or Solid. 3d. If Vignetted, how far down the figure is to show. 4th. If the print is intended for finishing in Crayon, Ink, Water Color, Pastel or Oil, please state which.

RETOUCHING. Coarse grinding on negatives for enlarging should be avoided.

WILLIAM H. RAU & CO., 1206 Chestnut St., Phila., Pa.

LARGE SIZES

—OF—

Photographic Matt-Surfaced PAPER.

The demand for it has increased to such an extent that it is now an every day want—a necessity. Below we give a list of sizes, as follows:—

Size.			Price per Dozen.
18 x 22, Matt-Surface Saxe,			\$.85
20 x 24,	"	"	5.00
22 x 24,	"	"	5.25
22 x 27,	"	"	5.25
25 x 30,	"	"	7.25
26 x 40,	"	"	9.00
35 x 46,	"	"	14.50

The above prices are Net Cash. Photographers at a distance can order through their Local Stock Dealers, if they prefer, as our papers are sold by every first-class Photographic Stock House in the United States.

Orders sent to us will receive prompt and careful attention.

Thos. H. M'Collin

Sole Trade Agent,

**No. 635 ARCH STREET,
PHILADELPHIA.**

Fort Ellis, M. T., August 27, 1886.

Thos. H. McCollin,

Sir:—I have received three numbers of the AMERICAN JOURNAL OF PHOTOGRAPHY so far, and would like to say that I would not do without it now for twice the price of the subscription.

H. C. TAIT, Fort Ellis, M. T.

SUBSCRIBE FOR THE

American Journal of Photography,

An Illustrated Monthly Magazine.

We ask you to favor us by examining the quality of the reading matter, which you will find practical and interesting.

As an evidence of the appreciation with which it is regarded by other photographic papers, we may mention that since the beginning of the year many of the articles have been reprinted by foreign photographic journals.

The British Journal of Photography, in its issue, April 30, 1886, page 279, says:

"We cull the following from the *American Journal of Photography* (Thos. H. McCollin, Philadelphia), which we are rejoiced to see has advanced into a lively magazine of practical and scientific information on photographic matters."

Then follows nearly a page of extracts from our editorials.

Subscription Price, - \$1.00 per Year.

We hope you will encourage us in our work by sending at once your subscription. Each month we shall present you with a choice illustration, any one of which will be worth the price we charge for the whole year.

THOS. H. MCCOLLIN, Publisher,

635 Arch Street,

Philadelphia.

Spring Grove, Va., August 25, 1886.

Thos. H. M Collin,

Dear Sir:—Enclosed find \$1.00, for which send me the AMERICAN JOURNAL OF PHOTOGRAPHY. The April number you sent is so good, I must see if others are equal. Send back numbers, except April, 1886.

HILRY HOSTETTER, Spring Grove, Va.